



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,713	01/26/2001	Ryusuke Sasaki	SIP1P041	8884

22434 7590 07/18/2003

BEYER WEAVER & THOMAS LLP  
P.O. BOX 778  
BERKELEY, CA 94704-0778

EXAMINER
----------

NGUYEN, KIMBINH T

ART UNIT	PAPER NUMBER
----------	--------------

2671

DATE MAILED: 07/18/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/042,713

Applicant(s)

SASAKI, RYUSUKE

Examiner

Kimbinh T. Nguyen

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This action is responsive to amendment filed 5/5/03.
2. Claims 1-10 are pending in the application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. (6,320,988) in view of Taubin et al. (6,009,435).

**Claim 1**, Yamaguchi et al. discloses computer-readable recording medium for transforming a 3D object (virtual skeleton model) having parts which is determined by vertexes associated with a cluster (a group of data points (nodes) on a graph) (col. 2, lines 28-36; figs. 8, 10, 11; col. 30, lines 13-14); in each frame display period, an amount of parallel movement of the cluster according to animation data defining a movement of 3D object (col. 16, lines 28-35); including an amount of parallel movement of the cluster in frame display periods; calculate parallel movement of the cluster and a weight predefined for vertex corresponding to the cluster, the vertexes parallel to each other (col. 29, lines 1-55; col. 30, lines 42-45). Yamaguchi provides a method transforming a skeleton model of a multiple-branching structure (a set of nodes) which

correspond to the coordinates of vertexes or clusters, the skeleton model ought to be restricted to a boundary moves and an amount of parallel movement is calculated to reduce errors. Yamaguchi does not teach an amount of parallel movement of the cluster in current level and previous level; however, Taubin et al. teaches number of vertices of current level and previous level which corresponding to the movement of cluster (figs. 6 and 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Taubin's teaching for determining cluster indices into the Yamaguchi's teaching for determining the movement of the nodes (or vertexes or cluster) in directions parallel to the straight-line edge, because applying clustered multiresolution polygonal models, a higher resolution level can be rendered yielding higher image quality (col. 1, lines 63-64).

**Claim 2**, Yamaguchi et al. discloses a movement of joint in a virtual skeleton (fig. 4) defining a framework of 3D object and including joints, vertexes (nodes) being associated with joints, the vertex 9col. 30, lines 3-4) corresponding thereto after the parallel movement of the vertexes (col. 31, lines 13-20; col. 35, lines 13-15).

**Claim 3**, Yamaguchi et al. discloses determining whether an amount of parallel movement of the cluster being processed is not defined (equation is indefinite or an unknown is degenerate or in state approximating) (col. 7, lines 50-52); calculating, if it is determined that the amount of parallel movement of the cluster is not defined, the amount of parallel movement of cluster having already processed and an amount of parallel movement of the cluster to be processed later (col. 28, lines 61-67); if it is determined that the amount of parallel movement of the cluster is defined, the defined

amount of parallel movement of the cluster being processed (col. 31, lines 17-19; col. 35, lines 13-15).

**Claims 4-7**, the rationale provided in the rejection of claims 1-3 is incorporated herein.

**Claims 8-10**, the rationale provided in the rejection of claim 1 is incorporated herein. In addition, Yamaguchi et al. discloses a video game program (fig. 21c); a computer storage medium (col. 2, lines 29-30).

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

With respect to Applicant's Arguments, claims 1-10 have been modified in this Office Action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2671

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimbinh Nguyen

July 14, 2003

  
MARK ZIMMERMAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600